

REMARKS**Introductory Comments:**

Claims 1, 2 and 4-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Scharber (USPN 6,542,964). Claims 7-17 are rejected under 35 U.S.C. 102(e) as being anticipated by Swildens et al. (USPN 6,754,699). Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scharber (USPN 6,542,964) in view of Brendel et al (USPN 5,774,660). The Applicants cancel claims 2, 4, and 8. The Applicants respectfully request reconsideration of claims 1, 3, and 5-7, and 9-17.

In Response To The Claim Objections:

Claim 10 is objected to because the Examiner believes it should begin with capital letter "A..." Appropriate correction is required. Claim 10 is rewritten in accordance with the Examiners suggestion. This is not a substantive amendment and is merely included for clarification. The Applicants believe that the objection to claim 10 is hereby overcome.

In Response To The Claim 102 Rejections:

Claims 1, 2 and 4-6 are rejected because, according to the Office Action, Scharber teaches a server load reduction system including a master URL containing data comprising: a proxy server comprising a proxy server cache and a distribution mechanism, said proxy server adapted to receive the data from the master URL, said proxy server comprising logic operative to record the data in a proxy server cache; said proxy server further comprising a distribution mechanism for distributing the data to a client server (Abstract, Col. 1, Line 31-Col.2 Line 64, and Col.8 Lines 8-65); the cache or proxy server allegedly comprises a distribution mechanism for passing data to other servers in a round-robin scheme, a cache server is receptive to URL requests and then attempts to retrieve the requested information and add it to its cache); and a proxy browser adapted to conduct a browse operation to request the data

contained in the master URL, said browse operation conducted through said proxy server, said proxy browser containing logic operative to notify said client sever to load the data when said proxy server contains all of the data (Col.4 Lines 2856, Col.6 Line 10-Col.8 Line 65 and Col.10 Lines 5-61).

In response to this rejection, the Applicants amend claim 1 to include a distribution mechanism for automatically distributing the data to a client group of computers when said proxy server contains all of the data, in accordance with Page 6, Paragraph [0018] and Page 7, Paragraphs [0021]-[0022]. The Applicants further amend claim 1 to include a multicast server loading the data in response to notification by the proxy server to load the data when the proxy server contains all of the data; and a multicast server client storage location comprising a browser cache receiving the data from the multicast server and storing the data in said browser cache for access by the group of computer users, as disclosed on Page 15, Paragraph [0020]-Page 16, Paragraph [0021]. Still further, the proxy browser of claim 1 is amended to contain logic operative to notify the multicast server to load the data to the client group of computers when the proxy server contains all of the data and when said client group of computers have received a command from the proxy browser to load the data, in accordance with Page 16, Paragraph [0021]. The Scharber reference does not disclose or suggest the subject matter of the aforementioned amendments.

Instead, Scharber is directed to a system wherein the selection of appropriate cache protocol for use by cache servers based upon the types of queries submitted. (Abstract.) Further, in Scharber, a cache protocol is used for internal communications among multiple cache servers for keeping the stored data synchronized. (Id.) In contrast, the present invention does not distribute data among multiple proxy (or caching) servers. Rather, it stores the data in a multicast server for distribution to clients.

Additionally, the data flow in Scharber may be described as "pull" or initiated by a client (or end user) request, as is typical for server systems. (Fig. 3 and Column 6, Lines 59-62.). More importantly, Scharber does not disclose or suggest, as do the claims of the present invention, a "push" data flow model having a server distributing the data to the client machines in advance of the order to the client machines to display the data. In other words, Scharber does not include automatically distributing the data, as claimed by the Applicants.

Therefore, because each and every element of claim 1 is not disclosed or suggested in Scharber, claim 1 is believed to be allowable. No new matter has been added to the invention. Claims 3 and 5-6 depend from the amended claim 1 and are also believed to be allowable for at least the aforementioned reasons.

Claims 7-17 are rejected as being anticipated by Swildens et al. According to the Office Action, per claim 11, Swildens et al teach method for reduction of server load comprising: conducting a browse operation with a proxy browser to find a master URL (Col.2 Lines 20-25, Col.8 Lines 10-14 and Col.13 Line 12-Col.15 Line 20; provision for browsing applications for U18L requests); requesting a unicast portion of data contained in said master URI, for use by a first client (Col.7 lines 40-49; client makes unicast request for data from the U12L in the cache server); receiving said unicast portion of said data in a proxy server (Col.12 lines 9-31; cache server receives U12L request from client); storing said unicast portion of said data in said proxy server (Col.7 Lines 54-57, Col.12 Lines 9-31 and Col.24 Lines 48-55; cache server logs and stores data from the client's URL request); notifying a first client server when said proxy server contains all of said unicast portion of said data (Col.7 Lines 50-57, Col.12 Lines 9-16, Col.13 Lines 6-59 and Col.15 Lines 9-18; clients are notified and provided with data once the cache server retrieves and contains the requested data, during performance testing clients are notified once the servers have downloaded all of the data); requesting a multicast portion of said data

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contained in said master URL for use by said first client (Col.7 Lines 50-57 and Col.13 Lines 50-58; cache server requested multicasted data from the origin site for the client); receiving said multicast portion of said data in said proxy server (Col 7, Lines 50-57, Col. 11 Lines 24-29 and Col. 2, Lines 9-16; cache server receives multicast data); and notifying a second client server when said proxy server contains all of said multicast portion of said data (Col 7, Lines 54-57, Col.12 Lines 9-42 and Col.15 Lines 14-19; subsequent clients are notified and provided with multicasted data once the cache server retrieves and stores the requested data, during performance testing clients are notified once the select servers have downloaded all of the data).

The Office Action alleges Claims 7-9 contain limitations that are substantially similar to claim 11 and therefore rejects them under the same basis.

In response to this rejection, claims 7 and 11 have been amended to include the steps of notifying a multicast server when the proxy server contains all of the data; loading the data to the multicast server and storing the data therein; and automatically loading the data to the plurality of client computers from the multicast server in accordance with Page 6, Paragraph [0018] and Page 7, Paragraphs [0021]-[0022]. These amendments are not disclosed or suggested in Swildens.

Instead, Swildens is directed towards a method for using a DNS server acting as a traffic manager by returning different IP addresses when asked to resolve the same domain name. Thereby, the DNS server distributes a load destined for a single target domain across multiple proxy servers (thus distributing the load). (Abstract, and Column 4, Line 66-Column 5, Line 12.) As with Scharber, the data flow in Swildens is typical and can be described as "pull" or initiated by the client (or end user) request. The present invention, in contrast, includes a "push" data flow model wherein the central server distributes the data to the client machines in advance of the order to the client machines to display

the data. In other words, in the Applicants' system, the data from the multicast server is automatically loaded to the plurality of clients.

Further, Swildens does not disclose or suggest use of "multicast" as a method for distributing the data, and the use of multicast facilitates network traffic reduction for the claimed system. Therefore, because Swildens does not disclose or suggest each and every element of claims 7 and 11, these claims are believed to be new and nonobvious.

When a browser requests documents from a server, it generates a small but measurable load on that server. When many browsers request the same document from a server, the load generated is in proportion to the number of browsers submitting requests. In various applications, such as instructor-led education applications, where then instructor wishes each student to see a particular web page, it would be unfair for the (possibly third party) server to be subject to the load spike generated by the multiple requests for the document the instructor wishes for each of the students to view. Therefore in the interests of both efficiency and a "good neighbor" policy, this load spike should be eliminated when conducting Internet based education sessions. The multicast steps of the present invention are directed to resolving this and similar long felt needs in the prior art.

Claims 7 and 11 are believed to be allowable for at least the aforementioned reasons. No new matter has been added to the invention. Claims 9-10 and 12-17 depend from claims 7 and 11 and are believed to be allowable for at least the same reasons.

In Response To The Claim 103 Rejections:

The Office Action alleges that Scharber teaches the system of claim 2 as applied above, yet fails to explicitly teach the server load reduction system according to claim 2 wherein at least two members of said group of user terminals operate different web browser programs, as in claim 3. According to

the Office Action, Brendel et al. disclose use of different browses accessed by the client users in the load-balancing distributed resource multi-node network (Col.2 Lines 9-67).

Applicants believe that this rejection is overcome in light of the amendments to claim 1 as discussed above. These amendments clarify that Scharber does not teach the system of claim 2 as applied above. Therefore the combination of Scharber and Brendel do not include all the elements of claim 3 and it is believed to be new and nonobvious.

Conclusions:

In view of the aforementioned remarks, it is respectfully submitted that all pending claims are in a condition for allowance. A notice of allowability is therefore respectfully solicited. Please charge any fees required in the filing of this amendment to Deposit Account 50-0476.

Should the Examiner have any further questions or comments please contact the undersigned. Please charge any fees required in the filing of this amendment to deposit account 06-1510.

Respectfully submitted,

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